is sized to fit within open end 230 and sealed there against by an o-ring 234. Disk 232 is releasably retained in open end 230 by means of a wire spring or clip 238. Clip 238 can be grasped by ends 238a thereof to remove from or insert into slots 240, cut through cylinder 226, through which radiused corners 238b are inserted. Disk top surface 242 is designed to cooperate with clip 238 to minimize any accidental disengagement thereof with disk 232. In addition, disk 232 includes a fluid inlet 244, a gas inlet 246 for receiving pressurized carbon dioxide gas and a fluid outlet 248. Disk 232 also includes a safety release pressure valve 250 and a liquid level sensor 252. Sensor 252 includes a rod 254 that is positioned within bottle 224 having a movable float 256 free to slide there along. Rod 254 includes one or more magnetically actuated switches 258 therein and along the length thereof, and float 256 includes a magnet 260. As is understood in the art sensor 252 operates whereby float 256 is carried by the level of liquid within 224. As magnet 258 moves adjacent one of the switches 258 turning it on, then a level can be indicated. Inlet 244 is fluidly connected to a J-tube 262, and outlet 248 is fluidly connected to a tube 264 extending to a point adjacent bottle end 228.

Please replace the last paragraph of page 19, which paragraph continues on and includes all of the following page 20, as follows:

A better understanding of the control logic utilized by the control of the present invention to monitor the viscosity of the beverage, control the viscosity of the beverage and to regulate the ice bank can be had by referring to the flow diagrams thereof shown in Fig.'s 23-26. Viscosity is monitored as a function of the current draw of the DC drive motor for the particular cylinder. In addition, each motor 217, as stated above, is controlled to operate at a constant 120 RPM rate. Thus, the more viscous the beverage the greater load and current draw on the motor 217 to maintain the set point rotational speed. Since the motors 217 are directly driving the cylinder scraper mechanisms, and the RPM's are kept constant, there exists a very direct correlation between the current draw of the motors and the viscosity of the food product. Each product delivery board has look up tables that correlate the current draw to an arbitrary viscosity number scale, which scale is utilized by each board to indicate a level of viscosity of the beverage within the cylinder. As seen in Fig. 23, a start point is indicated by block 350. The viscosity is monitored by each board 340,wherein at block 351 it is determined if the viscosity is below a preset viscosity minimum. If the viscosity is below that minimum, and it has been below that minimum for greater than one second, block 352, then at block 354, it is determined if compressor 270 is on. If compressor 270 is on, then the viscosity is controlled at block 356. A more detailed description of the

viscosity control is contained below with reference to Fig. 24. If compressor 270 is not on, then the control inquires if it has been off for more than two minutes, block 358. If it has, then compressor 270 is turned on at block 360 and viscosity is controlled at block 356. At block 361, it is determined if the desired viscosity has attained a predetermined desired level. If it has, the compressor is turned off at block 362 and the control goes to return at block 364 and monitors the viscosity. If at blocks 351, 352 or 358 it is determined, respectively, that the viscosity is not below viscosity minimum or the viscosity minimum was not maintained for more than one second or that the compressor has been off for less than two minutes, then the control, at block 366, determines if the float sensor 252 of the associated bottle 224 has been activated to signal for more beverage to be pumped therein, i.e. has beverage been drawn from the associated cylinder whereby further beverage must be replaced therein, and in its associated carbonator/blender 224. If the float has been activated, then further beverage is added to the cylinder by control of pump 320 and operation of valves 304 and 316. The control then inquires, at block 368, if the compressor is on, and turns the compressor on as needed or proceed directly to viscosity control, block 356. If the sensor 252 has not been activated to deliver more beverage within its associated bottle 224, block 366, then the control determines if 5 minutes has elapsed since the last refrigeration cycle, block 370. If less than the 5 minutes has elapsed, the control goes to return, block 372 where viscosity is monitored. If more than 5 minutes have elapsed since the last operation of the compressor, the control then inquires, at block 368, if the compressor is on, and turns the compressor on as needed, block 360, or proceeds directly to viscosity control, block 356.

Please replace the last paragraph of page 25, which paragraph continues on and includes the first four lines of the following page 26, as follows:

Disk 610 includes an outlet tube 620 having an upper end 620a and a lower end 620b, and a carbon dioxide gas inlet tube 622 having an upper end 622a and a lower end 622b. A plastic tube 624 is fluidly connected to end 620b of tube 620 and extends within cylinder 602 and terminates therein adjacent bottom end 604. A further plastic tube section 626 is fluidly connected on its proximal end to bottom end 622b of inlet 622 and on its distal end to an adapter fitting 628. Adapter fitting 628 permits fluid tight securing of tube 626 to plastic diffuser 630. Diffuser 630 has a larger diameter than tube 626 and has a perimeter side wall 630a and a bottom end 630b defining a closed interior space 632. Diffuser 630 is preferably made of a porous plastic material such as a microporous polyethylene as manufactured by Porex Corporation of Fairburn, Georgia.

Please replace the last paragraph of page 28, as follows:

It was also found that plate 634 serves to partially separate the beverage mixture into two regions, one above the plate and one below. This separation appears to provide for both a preferential carbonating of the beverage in the upper region as the diffuser 630 is located therein, and provides for a preferential dispensing of the lower portion. It is though that plate 634 prevents disruption of the aforementioned carbonation gradient permitting more orderly and efficient carbonation of the beverage, which enhances the overall rate and efficiency of carbonation. In addition, the use of the diffuser 530, as mentioned above, further contributes to carbonation speed and efficiency. Thus, carbonator 600 provides for the ability to fully carbonate a large volume of beverage mixture rapidly under high draw and/or high ambient temperature conditions. The primary holes 636 permit beverage flow there through under conditions of low or normal dispense demand in a direction from the upper region to the lower region. The large flow hole 638 insures against starving of outlet tube 620 under conditions of high dispense demand.